The above issues apart, Michael Selby is to be congratulated on an excellent second edition of his book. It meets its aims in much greater detail than before, is well illustrated (despite one or two pedantic quibbles such as the presentation of Figure 19.6), and is comprehensively referenced with a bibliography extended by over three times and containing in excess of 1000 citations, over 50 per cent of which are post-1980 and a pleasing number of which creep into the 1990s. The text therefore remains an asset, will be a regularly thumbed addition to the bookshelf and, particularly at the soft-cover price, an important addition to the library of any hillslope geomorphologist.

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FRACTALS IN GEOGRAPHY edited by N. Siu-Ngan Lam and L. De Cola, Prentice-Hall, Englewood Cliffs, New Jersey, 1993. No. of pages: ix + 308. ISBN 0-13-105867-3.

Numerous books have been published on fractals during the last decade. None of them directly addresses the uses of fractals in geography, and one of the objectives of this book is to fill this gap. It is intended for physical and human geographers, and researchers involved in cartography and terrain simulation (there is a clear emphasis on physical geography). The book is divided into four parts and a total of 14 chapters. The first four chapters were written by the two co-editors and provide a general introduction to the concepts underlying fractal analysis, measurement techniques and simulation. The second part, consisting of five chapters, is devoted to research and applications in physical geography. The third part comprises three chapters on research and applications in human geography. Finally, the last part includes two articles on applications in mapping sciences.

Overall, the value of the book is somewhat limited by the repetitive information, the lack of consistency and uniformity, and the lack of emphasis on more recent and original applications of fractal ideas in geography. For instance, no detailed reference is made to the extensive work of W. E. H. Culling (apart from a few references in Chapter 5), or to significant recent studies on fluid turbulence (e.g. Sreenivasan, 1991). In the first two chapters, very basic concepts and techniques are described at the most elementary level. These explanations can be found in numerous books and review papers published during the last decade and these two chapters may seem not to be essential. The fourth chapter in the introductory section is, on the other hand, a short but stimulating essay ('A Fractal Paradigm for Geography?'). In addition to discussing an up-to-date list of relevant books on fractals in natural sciences, it represents a valuable attempt to evaluate fractal concepts (scaling, complexity, self-organization at multiple scales) in geography.

Burrough's paper is the first of the second part, on fractals in physical geography. A significant part of the text has been published in a similar format elsewhere by the same author, and information is clearly missing on more recent work. There is, on the other hand, an interesting section linking geostatistical methods and fractal analysis. This is useful and has never been directly emphasized before. Goodchild and Klinkenberg emphasize fractals as null hypotheses for natural forms and channel network topology. This point has been reiterated in a number of papers, such as Goodchild and Mark (1987), one of several recent studies reflecting a renewed interest in drainage network characteristics. This chapter represents a valuable integration of numerous important concepts in fluvial geomorphology. Interestingly, in Chapter 7 Phillips directly addresses scale thresholds and the limitations of fractal analysis in relation to force-resistance relations and process-oriented work. The paper by Plotnick and Prestegaard deals with time-series analysis of bedload transport data. A unique dataset on continuous bedload transport measurements is presented, but relatively little inference is made from the stochastic and potentially fractal properties of the series analysed. There is, again, repetitive information on how to use, for instance, the variogram to determine the Hurst parameter and fractal dimension (repeated in Chapters 2, 5 and 6). This chapter is preceded by one article on multifractal analysis and nonlinear variability. This transition illustrates the lack of uniformity in approach. The chapter on multifractals is long (35 pages) and is conceptually and mathematically beyond all the other papers. No clear introduction on multifractals is presented and the lack of uniformity limits the usefulness of this article. Finally, Chapter 13, on fractal terrain simulation, is worth mentioning here because it successfully incorporates a process-oriented approach with a stochastic modelling procedure. The mixed periodic–fractal model suggested for terrain simulation provides interesting features from a geomorphological perspective. Thus, although suffering some weaknesses of editorial control, this book nevertheless does contain individual papers of interest, and on balance is a useful addition to the earth science literature. It provides the reader with a wide range of applications in geography, and computer programs are presented for fractal measurement and simulation.

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